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**STUDY  
PROJECT**

MEXICAN OIL: ITS HISTORY, DEVELOPMENT AND FUTURE

BY

COLONEL RICARDO KOLLER  
MEXICO

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MEXICAN OIL: ITS HISTORY, DEVELOPMENT AND FUTURE  
AN INDIVIDUAL STUDY PROJECT

by

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# ABSTRACT

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Oil has been an important resource in the modernization of Mexico. Most of Mexican economic development since petroleum nationalization has been based on this strategic source of energy by means of exploitation and exportation. Postrevolutionary governments have relied primarily on petroleum to accomplish the political, social and economic aims set forth in the Constitution of 1917. Oil revenues have allowed Mexican governments to pursue domestic political, social and economic goals and also ambitious foreign political and economic policies. This paper begins by describing the history of Mexican oil, from the ancient Aztecs to present Mexican oil policy. However, this paper focuses mainly on analyzing problems, goals achieved, development and oil policies since the oil nationalization in 1938 by General Lázaro Cárdenas. Facts and policies related to the boom and crisis of the 1970's, 1980's are also analyzed as are efforts made in the 1980's, 1990's to save the country from the economic crisis. Current oil policies are reviewed and conclusions given.



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## TABLE OF CONTENTS

	Page
ABSTRACT. . . . .	ii
CHAPTER I. INTRODUCTION. . . . .	1
Background. . . . .	2
From the Ancient Aztecs until General Porfirio Díaz . . . . .	2
II. THE INITIAL DEVELOPMENT . . . . .	6
Oil Development During the Porfiriato. . . . .	6
Oil Development in Revolutionary and- Postrevolutionary Periods . . . . .	10
III. NATIONALIZATION AND ITS CONSEQUENCES. . . . .	16
Principles and Objectives of Nationa- lization. . . . .	16
The Road to Complete Nationalization. . . . .	21
IV. FORGING A NATIONAL PETROLEUM COMPANY. . . . .	33
Reorganizing the Industry. 1946-1958. . . . .	33
Development Between 1958-1964 . . . . .	37
The Industry from 1964-1970 . . . . .	41
Oil Importance Between 1970-1976. . . . .	44
V. BOOM, BUST AND RECOVERY . . . . .	51
Previous Events Leading to Changes in Policies. . . . .	51
Policy Changes. . . . .	54
New Developments. . . . .	56
The Financial Crisis. . . . .	58
Strategy for a New PEMEX. . . . .	63
VI. MEXICAN OIL IN THE FUTURE . . . . .	72
Foreign Policy and Economic Policy: Some Facts. . . . .	72
Prospects for Mexican Oil . . . . .	75
VII. CONCLUSIONS . . . . .	79
BIBLIOGRAPHY. . . . .	83

## **MEXICAN OIL: ITS HISTORY, DEVELOPMENT AND FUTURE.**

### **CHAPTER I**

#### **INTRODUCTION.**

Since man invented the internal combustion engine in the nineteenth century, the most important source of energy has been oil, a mineral found deep in the earth. Many years have been passed since that time and many wars have taken place to gain the sources of that energy. Nations have fought for the possession of lands rich in these raw material because of national interests and the necessities of their people. Lately, relationships between nations have improved. In the industrialized world all nation need oil. Now, the countries which possess that resource threaten to impose conditions over the rest of the nations to accomplish their own objectives. Thus, until another source of energy is discovered humanity will continue to depend on petroleum for developmental needs. Mexico is among those nations who have oil as a natural resource. This a Latin American country was one of the most important exporters of oil. This paper will focus on the history, nationalization, development, boom, crisis and end with a review of Mexico's policy for recuperation.

## BACKGROUND.

Mexico, a country situated in North America, was discovered by Cristobal Colón and conquered by Hernán Cortez as a colony for Spain. Spain by that time had based its economy on the products reached from its colonies. Latin America was the result of the colonial expansion of Spain and consequently the supplier of wealths for the metropoli. Some of the most important riches that Mexico gave to Spain were gold and silver. The last nineteenth century, thanks to technological advances Mexico found another important source of riches, oil.

Oil as a raw material, source of energy and strategic material was widely desired by the emerging nations. Mexico, one of the major Western Hemisphere possessors of this strategic material, was initially not helped by this source of riches. Initially, United States and British oil interest made oil a source of many problems for Mexico. After the 1938 nationalization, oil still was a problem, but it also was a source of riches with which to develop the country. The history of oil in Mexico has been long one. Along the road there have been many difficulties and successes. For some time the Mexican economy has been based on oil and for some time Mexican internal and foreign policy was strengthened by having oil.

## FROM THE ANCIENT AZTECS UNTIL GENERAL PORFIRIO DIAZ.

Before the arrival of the Spanish in 1519 the Aztecs had

discovered petroleum along the plains near Coast of the Gulf of Mexico. This mineral later named "chapopote" was used by those people as medicine or glue. After Spanish arrival, they used "chapopote" to caulk their boats. 1

In 1822 after Mexico's independence was won from Spain, the situation about ownership of oil remained undecided. The companies working in exploiting petroleum operated under a variety of rules, laws and regulations; however, the laws of the Indies established that all subsoil substances were the inalienable right of Mexican Government. This position was ratified by the Treaty of Peace and Amity between Mexico and Spain signed on December 22, 1836. But the owners of surface lands exploiting oil would not conform and pressured the government to give them the subsoil in perpetuity. On July 6, 1865, Archduke Maximilian of Austria who by that time governed Mexico, declared that no person may exploit bitumen or oil without first having obtained express and formal authorization. On January 14, 1883, General Manuel González, President of the Republic, issued a decree to reform the Constitution of 1857. As a result a Mining Code was issued on November 22, 1884. This Mining Code permitted the surface owner to exploit and utilize petroleum and gaseous springs without the necessity of registration or of special adjudication. It was under these laws that the English began to compete with Americans in the exploiting of Mexican oil. 2

Before the General Porfirio Díaz period some discoveries had been made in the coastal region of the Gulf of Mexico. In 1859 a

group of Mexicans discovered small quantities of crude oil, in the Pánuco region of Tamaulipas and Veracruz states. In 1869 the Compañía Exploradora del Golfo Mexicana discovered oil on the Furbero hacienda near Papantla, Veracruz. In 1872 John C. Spear reported manifestation of oil on the Isthmus of Tehuantepec; the next year Mr. Prieto also discovered manifestations of oil along the Tamesí River in Tamaulipas. 3

ENDNOTES.

1. George W. Grayson. The Politics of Mexican Oil.  
University of Pittsburg, 1980, p. 3.

2. Antonio J. Bermúdez. The Mexican National Petroleum  
Industry. Institute of Hispanic American and Luso-Brazilian  
Studies, Stanford University, 1963, pp. 1-2.

3. Grayson, p. 4.

## CHAPTER II.

### THE INITIAL DEVELOPMENT.

It was during General Porfirio Díaz's government that most of the investment in Mexican oil fields were made by foreign companies from The United States, England, Holland, Germany and other European countries. The Mining Law of 1884 permitted them to possess lands and to exploit the subsoil. Also, General Porfirio Díaz gave those companies invaluable rights and facilities for development and expansion.

#### OIL DEVELOPMENT DURING THE PORFIRIATO.

The prevailing posture of the Mexican Government on property and exploitation of subsoil permitted the industrialized nations to develop a petroleum economy diminishing the dependence of coal for railroads, mining and electrical generation.

The first company which obtained a concession from General Diaz to exploit oil resources was the Waters-Pierce Oil Company, headed by Henry Clay Pierce who came from St. Louis to Mexico in 1885. This firm was an affiliate of Standard Oil of New Jersey. Pierce also was very active in the railroad business and participated in the construction of a rail line linking San Luís

Potosí and Tampico that was operated under the name of Ferrocarril Central Mexicano. 1

The most prominent personalities related to oil exploitation in Mexico during the Porfiriato were the English man Weetman Pearson and an American business man, Edward L. Doheny. The Díaz period lasted from December 1, 1884 to May 25, 1911. That period was when most of the investments were made because of the Díaz policy which gave lands, privileges and rights to his friends in order to bring supposed material progress to the nation in the shortest possible time. The favorable position of the owners was further enhanced by the Mining Law of November 25, 1909. This law reaffirmed the 1884 law by which the surface land owner has also the right to the subsoil petroleum. This last law was contrary to the spirit of the Constitution of 1857. 2

Under the protection of Díaz, Doheny acquired a three-hundred-thousand-acre hacienda named El Tulillo at the convergence of Tamaulipas, Veracruz and San Luís Potosí states and founded the Mexican Petroleum Company which made its initial strike on May, 14, 1901 in Ebano, San Luís Potosí at a depth of 525 feet. Doheny who felt that his success could produce a rivalry between him and Mr. Pierce, the head of Ferrocarril Central, set up a firm to provide asphalt for Mexico City, Guadalajara, Morelia, Tampico, Puebla and Chihuahua as a means to gain recognition from the central government. 3

Doheny created the Huasteca Petroleum Company to explore outside of his original area and focused his attention to the southern area of Tampico. Having had success by 1913, the

Doheny's wells produced nine million barrels annually or one third of total national production. Doheny was also responsible for an even more abundant gusher when Cerro Azul was completed in 1916. The culmination of the "Golden Line" gave a series of reservoirs that stretched thirty miles from Dos Bocas to El Chapopote on the Tuxpan River, and when it was measured produced 260,858 bpd. 4

As Mr. Pearson knew that Mexican geology was similar in some parts to that of Texas, he began to explore near San Cristóbal in the Isthmus of Tehuantepec to establish the country's first integrated oil firm. The Díaz administration granted Pearson vast concessions in government owned property in five states in order to prevent Standard Oil from securing a monopoly. In May 1908, Pearson opened San Diego 2 with an initial daily yield of twenty-five hundred barrels thus establishing Dos Bocas pool. This discovery was eclipsed when San Diego 3 blew on July 4, 1908. Estimates of this last well located seventy miles south of Tampico varied from fifteen thousand to eighty thousand barrels per day of oil output. Also, Mr. Pearson in 1908 set up the Compañía de Petróleo El Aguila to operate his leases in the Tampico district. Pearson's second major well discovered twenty miles west of Tuxpan in December 1910, was a gusher, producing one hundred bpd. This well in Potrero del Llano was the most prolific producer in the Golden Line. This discovery launched an oil boom in Mexico which attracted attention comparable to that of the Persian Gulf a half century later. In 1913 the Aguila company opened the Los Naranjos field south of La Huasteca's Juan

Casiano wells.

Díaz's advisers prevented him from favoring American investments over the British, as the President was anxious to balance these interests to prevent the domination of either. He therefore encouraged the work of men of both countries and sponsored helpful legislation for land acquisition. The Petroleum Law of 1901 enabled Pearson and Doheny to operate in extensive areas and the November 25, 1909, mining law reaffirmed the subsoil rights of the surface owner. These laws became the basis for the companies' later resistance to the nationalization of Mexico's oil. 5

Some of the reasons which permitted Mexico to become a pre-eminent oil producer were the Royal Navy's conversion from coal to oil in 1912. Thus, first lord of the Admiralty Winston Churchill's vessels could achieve sufficient speed to outmaneuver the German battle fleet. Henry Ford also nourished Mexico's petroleum demand when he transformed the automobile from an upper-class luxury vehicle to an automobile which millions of families could afford. 6

Another important discovery was made by the Southern Pacific Railroad in Pánuco near Tampico in 1910. This oil field proved to be the most important of the northern fields with a cumulative production of 276 million barrels over the next 25 years. 7

Mexico's first commercial oil production came at the turn of the century. An Englishman, Lord Cowdray, and two Americans, Edward L. Doheny and Charles A. Canfield, controlled 98 per cent of Mexican output. In 1910 this was only about 13 million

barrels of oil a year. Petroleum was not a problem for Díaz, but the laws promulgated by him later led to nationalization. 8

#### OIL DEVELOPMENT IN REVOLUTIONARY AND POST REVOLUTIONARY PERIODS.

After the overthrow of General Porfirio Díaz in 1911, the oil companies did not experience problems in continuing to exploit the oil industry. This same year the East Coast Oil Company opened the productive Topila pool twelve miles east of Pánuco. In 1912 the Royal Dutch Shell group entered the country and soon formed the Mexican Dutch Company "La Corona" which in January 1914 discovered Pánuco 5. Royal Dutch Shell acquired control of El Aguila in 1919 and gradually integrated it with La Corona. Gulf Oil and secured valuable leases in both the northern and southern fields. The Texas Company began activities in 1911 and achieved a maximum of output of 9.8 barrels nine years later. Standard Oil New Jersey started activities as a producer in 1917 when it bought the Transcontinental Petroleum Company owned by American, British and Mexican interests, whose output was 50,000 bpd in 1918. 9

As a result of this activity, oil production in Mexico rose from 10,000 barrels in 1901 to 3.9 million in 1908 to 55 million in 1917 to 193.4 million in 1927. This rapid increase took place despite the social and armed movement begun by Francisco I. Madero in 1910 who changed the domestic and foreign policies of Díaz and helped overthrow him. 10

One of the first acts of Madero when he took possession of

the presidency on November 1, 1911, was the imposition of a tax over the whole of crude oil production effective as of June 3, 1912. The next move Madero made to secure resources for the nation from oil was a government resolution that required the registration of all oil companies. This resolution was issued on June 12, 1912, clearly Madero recognized the importance of oil for Mexico and took steps to regulate the anarchic situation favored by Díaz.

When on February 19, 1913 Madero was forced to resign, the situation started by him concerning oil regulations changed. During the civil war a number of oil laws were adopted favoring or not favoring the companies according to the position of those who were in power. On August 20, 1914, Venustiano Carranza assumed power and decreed that the embarkation ports of the Gulf Coast were controlled by the Constitutional Authorities. However, the companies made arrangements with General Manuel Peláez who rebelled against President Carranza and took control over most of the oil regions on the Gulf Coast for six years. 11

When World War I broke out on August 1, 1914, great industrial and transportation changes took place. Demand for fuel and other petroleum products increased. Mexico was known by its low-gravity crudes from which fuel oil could easily be extracted. The demand for oil saw the companies in a great position despite the inconveniences which the revolutionary movement could place on them such as the executive ruling on July 21, 1914, which introduced export taxes of 10 centavos per ton on all exports of crude oil. 12

From the beginning President Carranza had a broad understanding about the whole oil situation, and he thought that oil was wealth which belonged to the nation. Thus, to solve problems related with petroleum he created a Technical Petroleum Commission. On January 15, 1916, Carranza disallowed and penalized the execution of oil contracts that were not obtained from his government. By August 31, 1914, Carranza in order to make uniform laws apply to the entire nation about oil agreements declared null and void all measures taken by State governments. On September 2, 1916, Carranza ordered that all the companies which operated in Mexico were to be inscribed in a registry . These regulations served to two purposes. They returned to the nation, by means of adequate laws, a mineral wealth of which it had been deprived, and conserved this same wealth by means of strict regulations. Carranza's policy sought the solution of the oil problem initiating a program which crystallized in Article 27 of the new Constitution promulgated on February 5, 1917. 13

Between April 1917 to August 1918 Carranza issued a series of decrees regulating taxes, contracts, declaration of oil lands, obligations and exploitation of subsoil, in order to accomplish the Article 27 of the Constitution. The companies refused to accept these regulations considering that the admission of their corresponding obligation would mean recognition of the rights of Mexican Government over the national oil pertaining. 14

Between 1918 to 1925 petroleum issues were settled by an anomalous system of presidential rulings which often produced difficulties, and even contradictory situations. It was not

until 1925, under President Cálles, that the Petroleum Law of December 29, 1925, set a time limit of fifty years on the confirmation of rights. In order to amplify government participation President Cálles on December 31, 1925, set up the "Control de Administración del Petróleo Nacional" and by another decree dated August 26, 1926, modified the first which between other things authorized this body to contract with private parties desiring petroleum exploitation rights or lands. 15

By 1921 Mexico was producing and exporting 193 million barrels of oil a year which represented a quarter of total world output at the time. Mexico also supplied most of the United States' needs as the boom in Texas was just getting underway. 16

In 1922 under General Alvaro Obregón's mandate, output began to decline as ruinous exploitation had diminished the productivity of the wells and operating costs began to rise. Additionally, the companies began fretting about their status under a government that collected taxes and supported labor demands. On the other hand, there were no taxes levied on oil production in the United States. At the same time in Venezuela President Juan Vicente Gómez, who seemed as cooperative as General Díaz, promised huge reserves and profits to investors leading to the abandonment by some medium-sized companies of Mexican oil fields. 17

This declining output continued until 1930 when El Aguila discovered the rich Poza Rica deposits between Tampico and Veracruz. This oil field produced a cumulative output of 941 million barrels until December 1968. Fortunately companies such

as La Corona opened new pools in the Tampico area. Other discoveries were made in the Isthmus of Tehuantepec, in Tonalá and Nuevo Teapa, 1928; El Burro, 1930; El Plan 1931; and Cuichapa, 1935. Unfortunately, daily yields plunged from 193,398 bpd in 1921 to 32,805 in 1932, rising slightly to 38,506 in 1938.

18

Under General Abelardo L. Rodríguez's mandate on December 28, 1933, the Mexican Congress issued a decree authorizing the President to set up a stock company entitled Petróleos de México, S.A. to supply the domestic market with petroleum and other petroleum products, meet the requirements of the National Railroads and to train technical personnel for the oil industry; one of the clauses established that only Mexicans could participate. Later, on September 25, 1934, a presidential decree liquidated the Control de Administración del Petróleo Nacional and transferred all of the assets to Petróleos de México. 19

ENDNOTES.

1. George W. Grayson. The Politics of Mexican Oil, University of Pittsburg, Press, 1980, p. 5.

2. Antonio J. Bermúdez, The Mexican National Petroleum Industry, Institute of Hispanic American and Luso-Brazilian Studies, Stanford University, 1963, pp. 2-3.

3. Grayson, pp. 6-7.

4. Ibid, p. 7.

5. Ibid, pp. 8-9.

6. Ibid, p. 9.

7. Ibid, p. 10.

8. Howard F. Cline, The United States and Mexico, Harvard University press, 1963, p. 230.

9. Grayson, p. 10.

10. Ibid, pp. 10-11.

11. Bermúdez, pp. 4-5.

12. Ibid, p. 5.

13. Ibid, pp. 5-7.

14. Ibid, p. 7.

15. Ibid, p. 9.

16. Cline, p. 230.

17. Grayson, p. 12.

18. Ibid, p. 13.

19. Bermúdez, pp. 10-11.

### CHAPTER III

#### NATIONALIZATION AND ITS CONSEQUENCES.

The set of decrees issued by different Mexican governments between 1917 to 1938 as a result of Article 27 of the Constitution of 1917 led through a series of circumstances to Mexico's oil nationalization. The role, played by some governments helped to this end in some cases and in others delayed this goal. However, most of the laws concerned with nationalization established the basis which led to the nation's ultimate desire.

#### PRINCIPLES AND OBJECTIVES OF NATIONALIZATION.

The man who made possible Mexican oil nationalization, General Lázaro Cárdenas, by 1920 as a Colonel assigned to Tampico knew well the problems of foreign oil exploitation and understood too the needs of the people working for those companies. At that time he found separate dining rooms for Mexicans; foreign workers received twice the pay and better housing even when they did the same work; companies showed scant interest in social problems affecting national workers; and when requested to do something to alleviate the situation, the owners preferred to spend money

in ways more in line with their own interests. 1

Conditions started to change when Cárdenas was elected president in 1934 and developed a platform committed to implementing the social goals of the Mexican Constitution. Encouraged by Cárdenas the ten thousand men working in nineteen separate labor organizations, forged a single national union on August 15, 1935. The Union of Oil Workers of the Mexican Republic acted to protect and improve the economic status of its members. This workers union soon became affiliated with the Confederation of Mexican Workers and on July 20, 1936 convened a general assembly to draft the industry's first collective-bargaining contract. 2

The first step made toward nationalization by Cárdenas was indicated in the decree of November 23, 1936, calling for the Mexican Congress to expropriate all things considered to be of public utility. Among others, capable of being expropriated were "the defense, conservation and development of natural resources" including petroleum and gas. On January 30, 1937, a decree created the "Administración General del Petróleo Nacional" whose object was to complete exploration and exploitation of the national reserves assigned to it. Also, the administration was to focus the industry to benefit the country, to regulate the domestic and export markets, and to facilitate the construction of pipelines, refineries and other facilities. 3

The companies understood the Mexican legislation. Article 27 of the Constitution of 1917 described as "inalienable" the nation's ownership of subsoil deposits, including "petroleum and

all hydrocarbons, solid, liquid or gaseous". Article 127 of the 1917 fundamental law stipulated that workers should enjoy an eight-hour day, one day of rest each week, full compensation for overtime, cash payment for their labor, healthy working conditions, social benefits, and the right to organize. 4

By 1930, petroleum workers endured physically exhausting work, bad living conditions and hard discipline. While their salaries were above the national average, they nevertheless represented very little money compared with that enjoyed by foreign managers, professionals and other specialized Mexican workers all of which created bad feeling and a sense of deprivation. 5

As a result of the "general assembly" convened on July 20, 1936 by the Confederation of Mexican Workers (CTM), the workers demanded an increase of 26,329,393 pesos in wage and welfare benefits. The companies counteroffer was approximately half of labor's total request which led to recriminations and litigation. As the result the demands were taken to the Board of Conciliation and Arbitration which upheld the contract demands, specified retroactive payments and restricted the number of "gente de confianza". The Supreme Court, attending a petition for an injunction, fully sustained the findings of the board in an initial decision given on August 18, 1937. The oil companies then expressed a willingness to increase remuneration by 26 million pesos, but wanted to maintain control over all personnel matters.

6

After its initial decision, the Supreme Court was under

extreme pressure, on the one hand if its final decision favored pro-company considerations, it was joining the foreigners; on the other hand, if it upheld the original ruling of August 18, the Supreme Court was patriotic. Among other pressures the Supreme Court was suffering, there were innumerable speeches given by Lombardo Toledano, an emergent leader of the C.T.M. against the alien companies. Aside from these pressures, President Cárdenas addressed the C.T.M. assembly on February 24, 1938. He told the workers that many Mexican economic ills were due to the foreign oil companies and that they were trying to influence Mexican justice by covert economic means. Also, the sudden withdrawal of funds from Mexican banks were attempts to undermine the Mexican fiscal and banking systems. 7

On March 1, 1938, the Supreme Court decided the foreign companies had to obey the mandate of the Board. Immediately the Federal Board of Arbitration and Conciliation set a deadline of March 7 for compliance. The companies got a bargain with the Board and workers by offering to raise wages by 24 million pesos. The Federal Board agreed to extend the deadline for compliance by a week, but on March 15, the companies notified the Board that they could not and would not comply. The reasons for this behavior probably stem from the President's conciliatory approach and that they thought they had a good case for diplomatic intervention. At worst they thought they could expect a temporary receivership. On the morning of March 15, President Cárdenas had said "no expropriation", but when he heard of the companies' refusal to comply he was pushed to make an

irreversible decision: the nationalization of the whole oil industry. That same evening, Lázaro Cárdenas met with his cabinet at six o'clock and told them of his resolution to nationalize the oil industry. At 10:00 P.M. the President announced by radio to the nation what he was going to do: to nationalize the foreign-owned oil industry in the public interest and for the honor of the nation. Companies did not believe this could happen to them. Thus on March 16 they offered to pay in full the 26 million pesos in dispute. General Cárdenas did not respond and on March 18, 1938 issued the expropriation decree. Mexicans considered the accomplishment of this goal as the beginning of their economic independence. 8

The labor conflict provided President Cárdenas with the justification for the solution reference the matters of sovereignty established in the Constitutions of 1857 and 1917 relative to ownership of subsoil products. 9

The principles and objectives of the oil nationalization were based on the Constitution of 1917 that was the result of the social and military movement initiated by Francisco I. Madero in 1910. Those principles are as follows: to Contribute to Social Development; to Change from a Colonial Economy, to Create a Public Interest. The objectives of nationalization were: Efficient use of Time; Integration with the Over-all Economy; Emphasis on Petrochemicals and Increases in Production; and a Build-up of Reserves. 10

## THE ROAD TO COMPLETE NATIONALIZATION.

The struggle for control and administration of the nationalized oil industry proved to be as difficult as the conflict with the foreign firms. The strong "Sindicato de Trabajadores Petroleros de la República Mexicana" (STPRM) dominated the petroleum sector through administrative councils. Many problems confronted the new industry such as old machinery, poor maintenance, scarcity of spare parts and irregularities in the employment of personnel.

From 1939 to 1946, the Oil Workers' Union and the government looked for a better way to structure the oil industry. The Government established the following points without union support for these policies:

1. To restructure the industry on a nationwide basis, eliminating duplication of functions carried out by the expropriated firms, e.g., advertising, sales, engineering, accounting, and medical services.

2. To reorganize the Oil Workers' Union to reflect the new structure of the industry.

3. To confer upon PEMEX the right to appoint "company men" to key positions.

4. To authorize PEMEX to eliminate positions it deemed unnecessary; to limit the number of permanent employees, and reduce the number of temporary employees to no more than 10 percent of the permanent work force.

5. To hold the line on pay increases, reducing

administrative salaries to equitable levels, and limiting such benefits as allowances for housing.

6. To emphasize merit over seniority in making promotions.

7. To demand greater efficiency and output from workers.

8. To allow management a free hand in reassigning workers to other parts of the country.

Cárdenas, who stressed his sympathy for socialism over syndicalism, insisted that petroleum must benefit all the nation and not only those working in the industry. This was so because even before nationalization oil workers enjoyed more benefits than other major groups of workers in the country. Workers' demand could not be implemented because the new administration permitted the workforce to increase from 15,895 in April 1938 to 19,316 in January 1940. 11

Vicente Cortés Herrera, the first Director of Petr6leos Mexicanos (PEMEX), pointed out that in the twenty-two months following nationalization of the oil industry, the growth of the budget was over 26 million pesos, which was the amount in dispute with the foreign companies. For that reason as a result of the growth of the workforce, it was not possible to develop the industry. In addition output had fallen indicating declining efficiency. The Director of PEMEX pleaded to save the industry which was then in a disastrous state because of worker inexperience, irresponsibility, lack of discipline and even wholesale thefts. Other problems faced the oil industry in Minatitlán and Arbol Grande due to workers refusal to work which caused great disturbances in these factories. The union

leaders complained about Cortés's failure to implement their petitions for greater economic improvements and demanded the director general's removal. 12

While that was happening, foreign oil companies claimed that they had been robbed under Mexican and international codes. They demanded justice and that their properties be returned. In trying to fix issues related with to these complaints, the initial diplomatic interchanges between the United States and Mexico were friendly. On March 27, 1938, Secretary of State Hull said that Mexico was within its rights to expropriate property for public utility, adding only that there should be fair, prompt and adequate compensation. In response, President Cárdenas told the United States that Mexico would honor its obligations past and present. President Roosevelt on April 1, publicly stated that the United States was more interested in the claims of its small farmers in Mexico than those of the large oil interests. The U.S. President also suggested that the companies should make arrangements regarding their investments in Mexico but without taking into account the valued lands expropriated. The conciliatory policy of Roosevelt made clear that the United States would not go to war with Mexico over issues related to the expropriation of American's oil. 13

In a last effort, the companies appealed the expropriation in Mexican Courts maintaining the position that they had been robbed by confiscation since they had not received payment for their investments. On December 2, 1939, the Mexican Supreme Court upheld the expropriations legality. In a retaliation the

companies started a direct boycott. When Mexico attempted to sell oil in Europe, the companies said Mexico was selling stolen goods. As a result no foreign-owned tanker would move a drop of Mexican oil. In addition no American firms would supply Mexico with equipment to run the nationalized industry. 14

Another boycott held now by the United States' government was related to silver production. Cancellation by the U.S. of its silver purchases lasted only few days. This short lived boycott was not due to altruism but because seventy per cent of the silver producers in Mexico were Americans. However, in the fight between the United States and Mexico over oil, the weapon of boycott remained sheathed. Therefore, Mexico had no dollars to buy Americans goods for the oil industry. 15

Great Britain, facing the same situation regarding oil nationalization, took an European approach to solve the problem. Britain on April 8, 1938, acknowledged the right of expropriation but told Mexico that "public interest" was not an issue. Additionally, the Foreign Office demanded "El Aguila" be returned to British owners. The Dutch Shell company valued its expropriated holdings at around \$250,000,000. Mexico's government responded that El Aguila was not British because it had been organized under the laws of Mexico as a Mexican corporation. Suddenly in May, Great Britain requested \$82,000,000. This was an overdue installment which Mexico owed for awards under the General Claims Convention of 1935. Mexico forwarded London a check but broke diplomatic relations with Great Britain. 16

Returning to issues related to the American companies, the

United States State Department encouraged them to make a direct settlement of some kind with Mexico, to this end in March 1939, the companies sent Donald R. Richberg to talk to President Cárdenas. Richberg wanted cash; he estimated the amount at \$260,000,000. If Mexico could not pay immediately, it should return the properties to their true owners. Mexicans answered that the Constitution of 1917 had returned such properties to the nation. In April 1940, Hull proposed arbitration to determine the amount to be paid and the means of payment. In May Mexicans rejected this invitation to arbitrate a purely domestic matter. The Cárdenas regime ended in November 1940, but the oil question continued. 17

Fortunately for all concerned in oil matters, the United States and Mexico reached an accord before Pearl Harbor. In November 1941 the two nations, conscious that the involvement in World War II was fast approaching, signed a General Agreement that swept old issues away at one grand stroke. While the war had not involved the Americas directly, it was necessary to part all diplomatic problems in order so as to meet the new threat. The agreement signed on November 19, 1941, cleared the old agrarian claims; Mexico promised to pay a total amount of \$40,000,000. Mexico had already paid \$6,000,000 so there remained \$34,000,000 with \$2,500,000 due each year. A number of economic matters were resolved. A reciprocal trade treaty was authorized. This was drawn up and accepted as a war measure in 1942. The Mexican peso was stabilized and the United States committed itself to purchase quantities of silver in Mexico at world prices. In

exchange for a more conciliatory policy by Mexico's President, General Manuel Avila Camacho, the United States pledged that long-term, low interest loans would be available to Mexico through the Import-Export Bank to help strengthen the Mexican economy in order to prepare for war. Other arrangements aside, the General Agreement of 1941 was made to modernize the creaky Mexican military machine. One of the most important problems solved by the General Agreement was the oil issue. The main basis to resolve this problem was not to consider oil still in the ground. The United States appointed Morris L. Cooke and Mexico Manuel J. Zevada to represent them to evaluate the expropriated properties and recommend terms of payment. When this joint board finished their mission, they reported that the expropriated oil properties had been valued at \$23,995,991. They recommended that one-third of this be paid on July 1, 1942, and the rest in five equal and consecutive annual payments. As the companies had no alternatives, they took the awards. Later, technical rather than political reasons changed the method and timing of the payments. When Presidents Roosevelt and Avila Camacho met in Monterrey, they made a joint which statement determined the final arrangements. 18

President Avila Camacho tried to solve problems related to the oil sector by appointing Efraín Buenrostro to succeed Cortés Herrera as head of Petróleos Mexicanos (PEMEX) in December 1942. Relations between the Company headquarters and the workers were still tense but a collective contract was signed between state firm and STPRM which appeared to re-establish harmony. By this

contract workers received forty-four hour week, higher holiday pay, and special benefits for union officials. The growing power of the STPRM soon caused tension to develop again. In 1943 workers in Ciudad Madero called a twenty-four-hour strike as a response to a supposed three hundred violations of the collective agreement. President Avila Camacho to prevent possible chaos in the industry instructed PEMEX to implement the wage scales contained in the award. As a result wages increased to keep pace with inflation some 50 per cent between 1941 and 1943. Also the President decreed a 10 per cent boost in wages for workers receiving less than 5.52 pesos per day. As a result PEMEX's budget devoted to compensations rose from 90 million pesos in 1943 to 123 million in 1944. In 1946, when a collective contract was to be revised, the oil workers began to repeat confrontations and recriminations calling a general strike for November 28, 1946. Buenrostro resigned and the STPRM postponed the strike until the newly elected president Miguel Alemán Valdés named another head of PEMEX. 19

During the period following the oil nationalization, PEMEX suffered a period of instability. Discoveries were poor through 1940, and 60 per cent of the limited drilling took place in the Poza Rica and Isthmus fields. In 1941 PEMEX extended its producing area to the Mecatepec hacienda and in 1943 discovered deeper deposits in El Plan in the Isthmian Region. In 1945 they recorded a new discovery, the Misión oil and gas field near the Texas border. Rapid drilling of Mexican oil reserves threatened to exhaust the capacity to supply domestic and foreign

necessities. Oil structure was developed to export oil to the Gulf Coast, this despite the domestic consumers represented by the great cities, potential industrial areas and the government situated inland. Another weakness was the incapacity to refine the crude for internal necessities leading to the result that twenty years after nationalization the cost of importating refined oil exceeded revenues from exports of crude oil by 120 million. This was the case even though the volume of exports was \$95,231,000 pesos greater than that of imports. This last statistic gives an idea of the corruption and inefficiency permeating PEMEX and the STPRM. 20

The picture however, was not completely negative. Mexico had focused world attention on a nationalist cause without parallel since the 1917 Russian Revolution, and as a result had mobilized the nation's popular sentiment and support. PEMEX found that companies such as El Aguila and La Huasteca had stopped explorations four years before expropriation leading to the exhausting of reserves. Also, the national oil administration found that no new or modern equipment existed. However, PEMEX drilling crews were able to succeed in squeezing oil from existing reserves and output in 1946 was the highest since the United States entered into World War II. The New York Times published that the "industry had been running with a fair degree of efficiency". 21

In summary, the events before, during and after Mexican oil nationalization set the basis for the development of Mexico's economy during the next decades. Some important issues should be

highlighted. First, Cárdenas failure to keep the industry from being dominated by the Oil Worker's Union whose members enjoyed excellent pay and benefits compared with those working in other areas, the STPRM also developed tremendous economic and political influence at the national level. Second, PEMEX's "Generation of 38", those who went to work in the new public oil body, were consistently advocating conservation of Mexico's national patrimony which led to output again plummeting just as it did in 1921. This occurred in order to avoid the industry once again becoming the focus of foreign aspirations. Later, as World War II began, output was again increased to meet wartime needs and obligations. Third, PEMEX in accord with its original goals was committed and expected to fulfill a vital social mission which was to furnish subsidized fuel to the mines, factories, farms, villages, railroads, the military, and the state electric-power company. In the social area the aim was to pay high wages, confer generous social benefits, and build schools, roads, bridges and other facilities in oil areas. Fourth, Mexicans were convinced that foreign capital must play a restricted role in Mexico's emancipated petroleum sector. 22

The oil debt and the agreements between Mexico and the companies was solved as follows: After World War II, President Roosevelt arranged for resumption of diplomatic relations between Mexico and Great Britain. Through diplomatic channels, the two governments reached an agreement announced on September 18, 1947. Mexico agreed to pay a sum of \$81,250,000 with interest. The British would also receive an annual payment of \$8,689,257.75 for

fifteen more years just as they had been receiving since 1938. The expropriation of British oil companies cost the Mexican people around 130 million dollars. The United States companies received 42 million dollars. When Mexico on September 30, 1949, made its final payment, the oil controversy between Mexico and United States passed into history. 23

ENDNOTES.

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2. Ibid.

3. Antonio J. Bermúdez, The Mexican National Petroleum Industry, Institute of Hispanic American and Luso-Brazilian Studies, Stanford University, 1963, p. 11.

4. Grayson, p. 13.

5. Ibid, p. 14.

6. Ibid, pp. 14-15.

7. Howard F. Cline, The United States and Mexico, Harvard University Press, 1963, p. 236.

8. Ibid, pp. 236-238.

9. Grayson, p. 15.

10. Bermúdez, pp. 19-22.

11. Grayson, pp. 19-20.

12. Ibid, pp. 20-21.

13. Cline, p. 244.

14. Ibid pp. 240-241.

15. Ibid, p. 241.

16. Ibid, pp. 242-243.

17. Ibid, pp. 246-247.

18. Ibid, pp. 248-249.

19. Grayson, p. 21.

20. Ibid, pp. 21-22.

21. Ibid, p. 22.

22. Ibid, p. 23.

23. Cline, pp. 25-251.

## CHAPTER IV

### FORGING A NATIONAL PETROLEUM COMPANY.

During the first years following Mexico's oil nationalization the structure was established to accomplish the social and economic goals of PEMEX. The Cárdenas and Avila Camacho governments made the agreements needed to pay the debt resulting from the oil expropriation and took the steps to start Mexican oil development. With its scarce resources and internal problems, PEMEX did the best it could, and was committed to improving its results. The following Mexico and oil administrations were dedicated to forging a real national petroleum company.

#### REORGANIZING THE INDUSTRY, 1946-1958.

A very few days after Cortés Herrera's resignation a new government led by Miguel Alemán Valdés, the first civilian president in the postrevolutionary period, took office on December 1, 1946. It was said that President Alemán's priority would be industrial progress. President Alemán selected Antonio J. Bermúdez to lead PEMEX. He had a reputation as an honest man who had cleaned up Ciudad Juárez's close to the border from

gambling, prostitution and graft. Bermúdez soon proceeded to standardize wage scales which eight years after nationalization still reflected the variations of the private companies. Also he proposed to raise salaries nine million pesos annually instead the fourteen million desired by the union workers. The STPRM responded with illegal twenty-four-hour strikes at the Poza Rica and Azcapotzalco refineries. On December 21, 1946, Alemán threw his weight behind the PEMEX Director General by disallowing the strikes. He mobilized army units near the fields, and ordered machine-gun-bearing soldiers in jeeps to escort gasoline trucks through the streets of the capital city. This action gained the support of powerful element of organized labor who believed in socialism but not in syndicalism. These leaders resented that the oil workers used their status as heroes in the "battle against imperialism" to obtain average salaries twenty times national rates. Even the powerful CTM openly criticized the oil workers intransigence. Public opinion also went against the workers. Bermudez and Alemán showed the nation who was in charge and inspired oil workers to replace confrontations with dialogue. They also tried to convince the workers that PEMEX represented the Mexican people not Wall Street barons. Bermúdez, an able negotiator, not only used his position to lead the industry, but also his friendship with Lombardo Toledano, the very powerful leader of CTM, to manipulate STPRM leaders. The acknowledgment by the workers and their understanding of Bermúdez's leadership enabled him to hammer out an agreement for resuscitating the industry. PEMEX gained the right to cut fat from its payrolls,

transfer workers more freely and contract with private firms for projects unsuited for union labor. The STPRM lost its exclusive right to serve as contractor for pipelines, refineries, offshore drilling, roads, schools or any other project which PEMEX itself had decided not to execute. Bermúdez's bold determination gained for him the admiration of leaders and oil workers leading to an improvement in relations between the two parties in the development of PEMEX. The Director General was committed to improve social conditions. He began to take actions to improve oil worker families standards of living. Almost every Saturday Bermúdez was seen in the oil fields asking about and making decisions on social problems. 1

Initial efforts to limit the PEMEX's labor force succeeded for only three years. The number of employees grew from 28,822 in 1947 to 45,532 in 1958. During the twelve years Bermúdez was the head of PEMEX, salaries and benefits shot up from 250 million pesos to 1,098 million. In that period PEMEX spent freely on housing, schools, clinics and recreational facilities for its employees and their families. Better relationships allowed PEMEX to increase exploration and exploitation. During Bermúdez's period 758 exploratory wells were drilled and the number of developmental wells rose from 221 to 2478. PEMEX discovered sixty-five new oil deposits in Tamaulipas and Veracruz states on the Gulf Coast and in the Isthmus of Tehuantepec corresponding to Veracruz, Tabasco and Chiapas states. As a result proven reserves of crude oil and natural gas tripled from 1.4 billion barrels in 1947 to 4.1 billion in 1958; crude output climbed from 156,487

bpd to 275,730 in the same period. Thirty natural gas fields were discovered during the Bermúdez years, and reserves rose from the equivalent of 372 million barrels to 1,558 million and annual output of natural gas rose from 32.9 to 262.6 billion cubic feet. These vast quantities of natural gas permitted PEMEX to sign an agreement with the Texas Eastern Transmission Corporation to export 200 million cubic feet per day of dry natural gas. Credits derived from the deal helped PEMEX to finance such projects as Ciudad PEMEX, gas-treating plants in Reynosa, the lube-oil plant at Minatitlán, the catalytic cracking facility at Azcapotzalco, and the new Ciudad Madero refinery. 2

In 1950 the Reynosa Refinery was completed by Mexican engineers producing initially 4000 bpd and later 10,000 bpd also there has installed a 1,800 bpd thermal cracking unit. The 30,000 bpd refinery at Salamanca also was opened in 1950. To serve the Pacific Coast a new plant was opened in Minatitlán. This plant had a distillation capacity of 85,000 bpd. Also, PEMEX had finished before the Bermúdez years another two refineries in Poza Rica and Azcapotzalco. With these refineries and the other five constructed before expropriation, PEMEX was able to refine in 1959, 328,000 bpd, compared with these 153,000 bpd refined in 1947. To handle an increasing volume of natural gas, PEMEX constructed processing complexes at Poza Rica, Ciudad Reynosa and Ciudad PEMEX and built 977 miles of gas pipelines to carry the fuel to urban areas. The main pipelines constructed were between Poza Rica and Mexico City, Ciudad Reynosa to Monterrey and the initiation of the important gas line from Ciudad PEMEX to

Salamanca. 3

Bermúdez developed PEMEX to the status of a modern and progressive industry. He calmed the troubled waters of labor relations, created an effective, professionally trained and loyal team that succeeded in exploration works in the period up to 1970. He was the pioneer of gas discovery and exportation. A backward step was the agreement signed in 1949 with a U.S. company, the Compañía Independiente México-Americana (CIMA), by which that company would receive 50 per cent of the revenues derived from each productive discovery well, plus 15 per cent as compensation for risk assumed. 4

#### DEVELOPMENT BETWEEN 1958-1964.

On December 1, 1958, Adolfo López Mateos assumed Mexico's presidency. He appointed Bermúdez ambassador to Iran and named Pascual Gutiérrez Roldán to head PEMEX. Gutiérrez Roldán was an engineer by profession, a banker by trade and an industrialist by chance. After the designation of the Director General, President López Mateos put PEMEX along with the Federal Energy Commission, the state steel industry and other agencies, under the jurisdiction of the newly created ministry of National Patrimony to secure a rational and better coordinated development of national resources. 5

As the new government got under way in 1959, a series of articles published by national and U.S. newspapers and written by Antonio Vargas MacDonald, whose public-relations firm had a

contract with PEMEX, focused on waste, inefficiency and other ills suffered by the oil industry. The abuses cited included (1) theft of oil and equipment, (2) chicanery in leasing service stations, (3) neglect and improper maintenance of machinery, (4) unnecessary and costly ship repairs in the United States, (5) wrongful estimates on contracts, (6) flagrant use of company automobiles for nonofficial activities, (7) overprescribing of drugs by PEMEX physicians in collusion with pharmaceutical firms, and (8) the establishment of "independent" businesses by administrators who then enriched themselves at PEMEX's expense. 6

Understanding these critics Gutiérrez Roldán began by lopping off deadwood with a view to eliminate some people from the forty-five thousand man workforce and save 20 million pesos from the 100 million payroll. During Gutiérrez Roldán's six year period, the workforce only grew from 45,695 in 1959 to 50,372 in 1964 which represented a 10.2 percent increase and the increase of production was 22.1 per cent. 7

The problems faced by PEMEX had to do with STPRM which disrupted stability and consequently produced losses of time and work. The problems were solved by the close friendly relationship between President López Mateos and Joaquín Hernández Galicia who became secretary general of the oil workers organization. Gutiérrez Roldán's policy was to eliminate corruption, clamp a lid on employment and slow the rate of contributions to social projects of the workers and their families. 8

Gutiérrez Roldán was devoted to improving the position of a

firm chronically short of operating capital and investments funds. In 1959 he obtained 40 million in loans and credits from four private U.S. banks to finance the construction of a major gas pipeline. Other U.S. financial institutions provided 50 million in credits, which were backed by natural gas exports. The European Economic Community furnished 35 million. In 1963 the French government lent 100 million for expansion of the petrochemical industry. Revenues grew 23 percent during the first year of the administration. Total net assets which stood at 6,958 million pesos in 1958, rose to 12,579 million pesos in 1963, and the debt fell from 3,839 to 3,110 million pesos in the same period. 9

From the loans obtained Gutiérrez Roldán began the construction of a 456-mile gas pipeline from Ciudad PEMEX to Mexico City to expand the capital's daily consumption of natural gas tenfold to 233 million cubic feet in 1963. Also a network of distribution lines was built across the North and Gulf Coast to supply twenty-four cities. Construction of a 357-mile product line was very significant in order to allow refineries between Minatitlán to Azcapotzalco to coordinate their production activities. It is necessary to point out that between 1958 and 1963, pipeline capacity for crude, natural gas and refined products increased 58 percent in length and 75 percent in volume. The Director General expanded refining capacity by constructing 140,000 bpd facility at Ciudad Madero and increasing the output of the Minatitlán, Salamanca and Poza Rica plants. However, the increase in production was modest in terms of crude output, only

going from 275,732 bpd in 1958 to 353,835 bpd in 1964. 10

In contrast with his predecessor Gutiérrez Roldán concentrated his efforts on developmental rather than exploratory activities. The increase of resources enabled him to expand the number of wells completed (3,752) and feet drilled (28.9 million) during his period compared to those of the previous one (2,148 and 12.2 million). This policy later led to the decrease in reserves because of the increase in consumption and the neglect of exploration activities. Thus, in 1968 Mexico became an importing nation. On the other hand, natural gas reserves expanded 41.7 in the Gutiérrez Roldán years in contrast to crude oil which only rose 5 percent. 11

Since the previous administration ideas had been broadened concerning the desirability of producing petrochemical products which would greatly enhance the value of petroleum. The Gutiérrez Roldán administration also liked the idea and provided the impetus necessary to accomplish that aim. PEMEX began to produce sulfur near its refineries, then built detergent plants, and gradually extended its activities to provide the materials for four main productive groups: fertilizers, plastic and artificial fibers, synthetic rubber, and benzene ring compounds. Plants producing those materials grew throughout the country in Minatitlan, Pajaritos, Salamanca, Ciudad Madero and Reynosa which were the principal production centers. By 1963, 205,000 tons of petrochemical products were sold in Mexico and in the following years sales totaled 277,473 tons at a value of 222.8 million pesos. Based on this structure, the number of such petrochemical

products increased from six to thirty-four in 1979. In summary, the Gutiérrez Roldán administration put the firm's finances in order, greatly expanded its pipeline system and established the petrochemical industry which later became an extremely important sector. However, as a result of the exploration and exploitation policies pursued by the Director General, the reserves declined and Mexico had to import hydrocarbons by 1968. 12

#### THE INDUSTRY FROM 1964 TO 1970.

With President Gustavo Díaz Ordáz, new changes came to PEMEX. The President appointed Jesús Reyes Heróles as Director General. He was a lawyer and politician born in Tuxpan, Veracruz, an important oil area on the Gulf Coast. He had several important jobs in Mexican policy making as head of different executive branch offices and other governmental institutions. According to the Díaz Ordáz policy, one of the first steps taken by Reyes Heróles was to commence negotiations to terminate voluntarily the risk contracts concluded by Bermúdez with the Compañía Independiente México-Americana (CIMA) and other U.S. companies. On June 5, 1969, PEMEX rescinded all the contracts made with CIMA and paid 18 million for its rights, goods, equipment, data and anticipated proven reserves. Also PEMEX rescinded contracts with Sharmex, the Isthmus Development Company and Pauley Noreste. In this manner President Díaz Ordáz liberated without limitations 3,858 square kilometers of national territory for use by PEMEX and for the nation's benefit. 13

Contrary to the previous administration, Reyes Heróles was very concerned with oil exploration to augment the reserves in crude. The percentage of wells were increased from 15.2 to 30.1 as 958 million of the 2,041 million pesos earmarked for drilling were devoted to that purpose. Quality of exploration was improved thanks to the installation of processing centers for seismological information in Tampico, Poza Rica, Coatzacoalcos and Reynosa. Discoveries of oil in Reforma, Chiapas in the early 1970s were due to these techniques and equipment. 14

Despite improvements in exploration, however, proven holdings increased only 6.5 percent, from 5.23 billion to 5.57 billion barrels of crude in this administration. Fortunately, PEMEX discovered the Arenque field in the Gulf of Mexico, eighteen miles east of Tampico and the Marine Golden Line, which permitted PEMEX to increase somewhat crude output expanded from 362,030 to 486,573 bpd during Reyes Heróles period. However, output increasingly failed to keep pace with demand, which had then growing at 7 percent annually. This led to the importation of crude for domestic consumption. 15

To promote self-sufficiency, the Director General encouraged the output of refined products and petrochemicals. He insisted that Mexico's interest should not be simply to obtain more primary or natural yield of ever larger amount of crudes, but to reprocess and refine residues which would give Mexico more valuable products. As was proven, for each peso derived from highly refined gasolines, more than 50 pesos could be obtained from petrochemical products. Between 1959 and 1964 domestically

produced petrochemicals obviated the need for 712 million pesos worth of imports. The implementation of the new petrochemical policy would save 3,999 million pesos between 1965 and 1970. 16

The Director General wanted very much to encourage to Mexico's promotion of facilities for oil field research and development. Thus on March 18, 1966, the Mexican Petroleum Institute began operations to accomplish the following goals: (1) perform hydrocarbon-related research that accentuated applied science, (2) train the industry's personnel, and (3) form a bridge between technical experts and the petroleum sector. This efficient institution obtained hundreds of acknowledgments because of its professional and valuable work. As an example, investments in industrial plants at home and abroad which employ processes patented by the institute exceeded the sum of seven billion pesos by 1979. 17

The PEMEX fleet began operations in 1938 with only one tanker and 41 smaller ships. Reyes Heróles also took measures to develop this area, expanding its size from 191 to 211 vessels. As a result its capacity was increased from 191,670 tons in 1964 to 264,294 in 1970. 18

As a previous Director General of the Mexican Social Security, Reyes Heróles was concerned about the needs of all the Mexican people. As a result of this emphasis, he contributed notably to workers' well-being by improving PEMEX's poor safety record, extending health coverage to transitory workers, and increasing medical and hospital services. Another important goal of the administration was to introduce computers to exercise

central control over all warehouses so PEMEX would know the size and composition of its inventory, be able to eliminate old or surplus material and avoid unnecessary purchases. This innovation saved the company over one billion pesos. Reyes Heróles contributed to an expansion of personnel by 33 percent, from 53,973 in 1965 to 71,062 in 1970. He also established an Office of Industrial Security to improve security. Reyes Heróles at the end of his period had increased exploratory drilling; created the Mexican Petroleum Institute; enlarged PEMEX'S fleet; canceled foreign contracts; and asserted control over basic petrochemicals. On the other hand, Mexico in that period became a net importer of hydrocarbons. 19

#### OIL IMPORTANCE BETWEEN 1970-1976.

On December 1, 1970, Luís Echeverría Alvarez took office as president. He began a new governmental program which became known as "shared development". This program while led to an opening of the political system. In the realm of economic policy, it emphasized redistribution, social welfare and commitment to improve the agricultural sector, especially the "ejidos" or communal agriculture. This program also tried to increase state investments to remove bottlenecks to economic growth. Echeverría appointed as Director General of PEMEX Antonio Dovalí Jaime, who during 1966 -1970 served as director of the Mexican Petroleum Institute and before that in other governmental offices. Echeverría's oil policy set ambitious goals

for the company. At the outset of his administration, he announced an eighteen-billion-peso investment plan to (1) locate new reserves, (2) raise gas and oil production over 8 percent annually, (3) attain self-sufficiency in crude, and (4) quadruple the output of petrochemicals. PEMEX achieved the First three goals, but fell short on the petrochemical objective. 21

Dovalí, a dynamic leader, was fortunate in discovering oil in the Villahermosa area in 1972. As a result of new techniques developed some years before in coordination with the Mexican Petroleum Institute, on May 15, 1972, PEMEX announced two important discoveries in Chiapas state: Sitio Grande, near Reforma, this first well tested 1,720 bpd of oil and 3,800 million cubic feet (Mcf) of gas, and the second, Cactus 1 also close to Reforma, yielded 2,550 bpd and 5,800 Mcf. The discoveries revealed oil over 13,775 feet below the surface which compared favorably to Alaska's Prudhoe Bay. Reforma's output of oil and gas rose from 10 million barrels in 1973 to 164 million in 1976. OPEC's decision to boost the price of oil fourfold gave impetus to production activities in Mexico whose oil bill shot up 140.7 percent to 3,600 million pesos between 1973 and 1974. While old wells were producing an average of 120 bpd, new wells in Chiapas were providing 2,808 bpd, and those in Tabasco were furnishing 9,672 bpd. Reforma's wells contributed to raise gas production daily from 1,882,000 Mcf in 1970 to 2,114,000 Mcf in 1976. 22

During the first half of 1974 Mexico was importing 33,884 bpd of crude. As a result of these investments and discoveries,

on September 17, 1974, Mexico again became a net exporter of oil having exported by the end of the year 60,000 bpd, an amount that doubled the next year. In 1974, the first increase in domestic oil production took place. Annual yields of crude and liquids climbed to 238.3 million barrels surpassing for the first time the record established by the foreigners in 1921 with their discovery of Chac 1. Its success near Ciudad del Carmen was compared with those of Reforma and Poza Rica. 23

In 1971 Dovalí had forecast that in the following five years proven reserves would increase to 9.1 billion barrels. However, despite the vertiginous rise in crude output, reserves only increased from 5.6 to 6.3 billion barrels. PEMEX's conservationists warned that in order to husband reserves for future generations it might be necessary to limit exploitation. Increased crude and gas output necessitated processing plants and pipelines. Dovalí completed the most important facility that was begun during Reyes Heróles period, which was Tula's refinery with a capacity of 150,000 bpd, and which cost 3,400 million pesos. Work to develop refinery facilities began on Salina Cruz (170,000 bpd), Cadereyta (235,000 bpd) and on a 205,000 bpd increase in the capacity of the Minatitlán refinery. In this manner PEMEX's capacity for primary distillation and fractioning of absorption liquids rose from 592,000 bpd in 1971 to 760,000 in 1974, to 968,500 in 1976. 24

In accordance with four of the administration's oil industry goals, Dovalí initiated construction of a petrochemical complex at La Cangrejera in Veracruz state with nineteen plants

and a projection of 2.8 million ton-per-day capacity that by the end of 1976 could liberate Mexico from importation of different products derived from oil. The projected date for self-sufficiency in basic petrochemicals later was postponed to the end of the decade. Nonetheless, Mexico produced 13,768 million tons with a commercial value of 16,861 million pesos during the first five years of Dovalí's administration. To improve efficiency in handling large volumes of crude and natural gas, PEMEX's most ambitious project was to construct a 30-inch, 372-mile pipeline from Cárdenas in Tabasco state to Poza Rica. This project made possible the conveyance of crude from the Southeast to the Salamanca, Azcapotzalco and Tula refineries and reduction of PEMEX's vessels operating between Pajaritos and Tuxpan. Among other projects completed were a second pipeline from Ciudad PEMEX to Mexico City and from there to Salamanca, a Salamanca-Guadalajara product line and additional Minatitlán-Salina Cruz pipeline, and a crude line between Ciudad Madero and Cadereyta. The growth of the workforce seemed to be almost impossible to stop, between 1970 and 1976 the number of employees rose 30 percent , from 71,737 to 94,501, consequently salaries and social benefits grew at a phenomenal rate during the period. 25

The increase in domestic petroleum prices helped PEMEX to finance its activities and the growth in output attracted the interest of foreign financial institutions. Thus, on March 18, 1976, Dovalí pointed out that PEMEX enjoyed ample credit from domestic and foreign sources. This "ample credit" later led to

PEMEX getting into a great deal of debt. In summary Dovalí's leadership conducted PEMEX to a new era in accordance with the policy framed by President Echeverría and based on exploration and exploitation of new discoveries in crude and gas. Unfortunately, production and demand increased equally not permitting an increase in reserves. Investment in goods for the industry was offset by high salaries and great social improvements for the oil workers and their families. One great goal was achieving self-sufficiency in crude that allowed Mexico to export oil by the end of 1974. 26.

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CHAPTER V  
BOOM, BUST AND RECOVERY.

The basis for the boom and bust of the oil industry was established as a result of different administration policies related not only to oil issues but also to overall presidential policy. Thus each Director General under directions issued by the respective president contributed to forging the industry's development and to its weaknesses.

During the Echeverría's period a change was made in the administration of policies related to political, economic and social matters; these changes were reflected in the name "shared development" which established the foundations for the next presidential period led by President José López Portillo.

PREVIOUS EVENTS LEADING TO CHANGES IN POLICIES.

Thus as there were changes and improvements related to oil during the Echeverría's mandate, there also were a number of changes in the rest of the issues concerned with the administration of a nation. Total government spending increased from 23.6 percent of GDP in 1970 to 36.6 percent of GDP in 1975, and the expenditure increase focused on such items as health,

housing and education. Equally important was the increase in public investment which went from 35.5 percent in 1970 to 46.2 percent in 1975. There was mainly dedicated to improving agriculture, energy, heavy-industrial and capital goods. Achieving agricultural self-sufficiency and alleviating the plight of ejidal farmers were also goals of the administration who raised total government expenditures from 7.5 percent in 1971 to 14.7 percent in 1975, while industry and commerce remained stable at around 30 percent during the period. 1

The mixed private and public (parastate) sector grew rapidly during the Echeverría years. Thus in 1975 around the percent of the total expenditure of the federal government was dedicated to state enterprises. The funds went to PEMEX, CFE (the Federal Commission of Electricity), and FERTIMEX (the National Fertilizer Company). By 1977 these parastate entities accounted for 90 percent of total government investment. It is necessary to point that while increases were made in the prices charged by those parastates in 1972 and 1974, they were not enough to halt their growing deficits. In this way more than 50 percent of the savings of the public sector went to relieve its budget deficits. 2

Mexico was also hit by the 1973 oil crisis. A past policy of low prices and minimal investments in the oil industry found to Mexico ill prepared to face the world oil shortage. Failure in oil exploration and other unnamed factors made Mexico a net petroleum importer in 1971, an event that impacted badly on Mexico's balance of payments situation. As a solution Echeverría decided to borrow money on the international market. The presence

of recycled petroleum dollars in the international banking system and the American banks having a surplus of fund with little demand, make it possible for Echeverría to obtain sufficient funds for his plans. This was the method for a government faced with the perceived need to rapidly expand its expenditures to achieve its goals and unable to implement basic tax reform. 3

The 1973 crisis was an important problem for Mexico as reflected by the borrowing, inflation and capital leaving Mexico. In 1976 capital flight assumed disastrous proportions. Over a half-billion U.S. dollars left the country over the winter. With further increases in the current-account deficit, the government had no choice but to continue borrowing abroad. 4

Shared deveploment had failed because of a number of circumstances among which were the policies implemented by Echeverría. During 1970-1976 agriculture grew at a rate of only 1.6 percent. In the same period the deficit in the current account of the balance of payments quadrupled. As a result of declining exports and heavy import needs because of the government's ambitious investment program, Mexico was forced to rely on foreign borrowing. The foreign debt in U.S. dollars grew from 4.5 billion to 19.6 billion. The public deficit in Mexican pesos rose from 4.8 billion to 42 billion between 1971 to 1975. In October of 1976, Mexico was forced to reach a politically unpopular agreement with the International Monetary Fund (IMF) in return for a loan of 1 billion dollars. 5

### POLICY CHANGES.

With the failure of shared development, José López Portillo as candidate and therefore as Mexico's incoming president, put his closest advisers to work in search of a solution to Mexico's political and economic crisis. In this regard, López Portillo had two political priorities: the restoration of business confidence, and the establishment of popular confidence in the regime. In fact, López Portillo's solution concerning economic issues was directed at rapid petroleum exploitation and exportation. This idea had begun to germinate during the Echeverría's years and was supported by some PEMEX bureaucrats who believed that exportation on a sizable scale was feasible. 6

However, Echeverría and Dovalí did not think alike on this issue, and no decisions were made on the matter of increasing exportation. López Portillo, however, was determined to be a popular president, both with the business community and the public in general. During his political campaign López Portillo had planned high growth rates to provide an adequate supply of jobs to the people by means of enough flow of resources into government coffers in order to achieve his political goals. Thus López Portillo saw government spending as an essential instrument to restore economic growth and strengthen his political support; rapid petroleum exploitation and exportation appeared to provide the ideal solution. 7

López Portillo took office as president on December 1, 1976.

He then divided his six-year period into three two-year segments: 1977-1978 was a period of recovery; 1979-1980 was to be a period of consolidation; and 1981-1982 was to be a period of rapid economic growth. These strategies would be possible by means of oil exportation. As a result of his planned objectives during the political campaign and the first months implementing his policies, López Portillo announced that the Mexico's oil reserves had doubled from 6 billion barrels to 11 billion, thus putting the country into the category of a potential oil rich country. 8

One of the first steps the López Portillo administration was to reshape and reorganize the federal government structure. This reorganization was known as the Administrative Reform which in specific terms modified the federal government by creating a sectorial structure, with each department within a given sector. Among the policies to be implemented, there were important new priorities related to the rapid modernization of certain industrial areas. Specifically, the exploitation and exportation of oil reserves were given high priority. 9

To afford its governmental restructuring Mexico needed adequate programs and planning to respond to the new circumstances created and the powerful new ingredient, oil. Thus, each sector was responsible for creating its own national plan, that together became the Global Development Plan. The Global Development Plan was announced on April 15, 1980. Its main objectives were: (1) to be applied to all aspects of national life, private and public sector, under the terms of the National

Popular and Democratic Alliance for Production, (2) the plan specified twenty-two separated basic points, but point number ten addressed the utilization of oil as a lever for economic and social development by channeling the funds derived from this source into development policy priorities, and (3) the plan set certain quantitative goals for growth during 1980-1982. 10

#### NEW DEVELOPMENTS.

As has been noted during López Portillo's political campaign, he told his closest men to search for solutions to Mexico's political and economic problems. Specifically in this regard Jorge Díaz Serrano was assigned to gather information related to oil. Díaz Serrano, who had a great number of friends in PEMEX because of his business relations with the company, was able to gain the cooperation of those PEMEX dissidents who believed that potential reserves were far greater than those officially admitted by the institution. His report to López Portillo firmly supported by data argued the feasibility of Mexico becoming a major exporter and set a timeable for its achievement. Three weeks after López Portillo took office, Díaz Serrano substituted the official figure for proven reserves of crude and natural and liquid gas of 6.3 billion barrels, set by the Echeverría administration, for another figure increasing to 11.6 billion barrels the reserves ; and by the end of 1977 those figures had been increased to 16 billion barrels. Díaz Serrano as Director General of PEMEX in March 1977 officially promulgated

the plan calling for the doubling of crude production and refining capacity in six years and for the tripling of Mexico's production of basic petrochemicals. The established goal of 2.25 million barrels of crude production and of 4000 million cubic feet gas per day was to be reached in 1982. 11

An important corollary of this overexploitation and overexportation was the liberal importation of machinery and equipment, since national industry could not supply the inputs that were essential to the rapid expansion of the petroleum industry. Another implication was a great and growing dependence on private domestic and foreign contractors, since Mexico lacked the technology and equipment to exploit lucrative offshore reserves. 12

PEMEX's new administration supported a continued revision upward of the oil production ceiling. The initial goal of 2.25 million barrels per day to be reached in 1982 was revised. In March of 1978 PEMEX announced the production goal would be reached in 1980 and that the production by 1982 would reach an a figure of 4,000 million barrels per day. The expansionist strategy did appear to be solving Mexico's political and economic crisis. It was providing sufficient capital along with rapid economic growth that hopefully would signify restoration of public confidence in the regime. As a result of the increase in oil reserves and economic growth the country was extremely attractive for foreign loans. Thus, Mexico was able to abandon the forced and unpopular 1976 IMF agreement in 1978 and the IMF loans were paid off in advance. 13

The increasing importance of petroleum in the Mexican economy made PEMEX's activities of central importance to economic policymaking. The enterprise's share of the public debt went from 11.3 percent in 1976 to 22.6 percent in 1980, and to 29.2 percent in 1981. PEMEX expenditure as a percentage of total government expenditures went from 19.4 percent in 1977 to 26.6 percent by 1980. 14

Another indication of the importance of oil in the Mexican economy was its importance in the value of exports. By 1976 petroleum and its derivative accounted for 16.8 percent of the value of all exports; by 1980, the value reached 67.4 percent, and in 1981 it was 74.4 percent. The taxes paid by PEMEX as a percentage of total taxes collected by the federal government went from 5 percent in 1976 to 24.9 percent by 1981 making PEMEX the most important taxpayer. 15

PEMEX was able also to successfully discover new oil reserves. A new oil field was discovered in Chicontepec in 1978 while exploration in the Bay of Campeche pushed production of these offshore reserves to one-third of total production by 1980. Between 1978-1979 Mexico doubled its estimates of the country's proven reserves from 20 billion barrels to 40 billion and by 1980 the figure was increased to 50 billion. 16

#### THE FINANCIAL CRISIS.

The oil export strategy did fulfill one of most important goals of López Portillo's economic policy. Economic growth was

restored with annual growth rates of 8.5 per year for the period 1978-1981. On the other hand, the relationship of the deficit on current account to gross domestic product reached 3.5 percent in 1979 and a record 4.9 percent in 1981. Contributing to this phenomenon was the start up costs associated with getting the petroleum flowing, which required imports and capital-investment outlays greater than export receipts. Therefore, PEMEX's participation in total imports of the public sector went from 18.5 percent in 1970 to 44.8 percent by 1980. Other disturbing indicators included stagnation in manufacturing exports and the agricultural crisis. Beginning in 1978 manufactured products began to lose their share of the value of total exports. In 1960 Mexico was self-sufficient in agriculture and by 1980 one-quarter of all foodstuffs had to be imported. Thus, while food represented 4 percent of the value of total imports in 1976, by 1982 the figure was 13.1 percent. The inflow of capital brought about by rapid petroleum development produced an overvalued currency that for reasons of national pride was not devalued. The shortfall between foreign exchange earnings and requirements was made up by foreign borrowing. Employment grew at annual rate of 4.7 percent between 1979 and 1981, because of construction and public works, areas that are not long-term job producers. Incredibly, employment in the petroleum sector increased only 5 percent between 1973 and 1980. As a result of inflation caused by capital inflows, the purchasing power of the population declined about 12 percent between 1977 and 1980. 17

By the end of 1982, Mexico faced its most severe economic

crisis since the Great depression. Mexico, which in 1981 was the fourth-largest oil producer, suffered the following year a fall of gross domestic product of 1.5 percent and an inflation rate over 100 percent. The policy of borrowing produced a foreign debt of almost 84 billion dollars, which was second only to Brazil's debt. Foreign-exchanges reserves were exhausted. Under these economic conditions, Mexico had to sign an agreement with the International Monetary Fund in November of 1982; in this manner Mexico was committed to a strict austerity program in return for a loan of 4 billion dollars. 18

The 1982 economic crisis was the result of the interaction between external and internal circumstances. Those criticizing internal factors focused their comments on the "policy errors" made by the López Portillo administration. The most important errors were the following: a too rapid pursuit of oil export strategy; a failure to take adequate measures inhibiting imports; the maintenance of an overvalued peso; an uncontrolled expansion in government expenditure; and a failure to follow policies that could have maintained the confidence of the private sector thus avoiding the outflow of capital. 19

Petroleum revenues for 1982 had been anticipated at 27 billion dollars but only generated 16.594 billion dollars. Also, PEMEX's exports had been calculated to rise to 20 billion dollars but only reached 14.585 billion that year. The reasons were that world price of oil had begun to drop in mid-1981, forcing Mexico to roll back its prices in order to hold contracts. The government attempted to regain control over the crisis in the

external sector by devaluating the peso in February of 1982. By August the peso had suffered three devaluations and lost half of its value. Devaluation, the principal instrument to manage the situation, proved not to be satisfactory. Indeed, the devaluations spawned capital flight of over 20 billion dollars between 1981 and 1982, a situation that the government regarded as disastrous. By that time the international banks which had lent money to Mexico began to pressure to recover its funds from a country that seemed to be on the brink of disaster. Banks like Citibank, Chase Manhattan Bank and the Bank of America had 40 per cent of their capital tied up in Mexico. It is also necessary to note that in 1982, Mexico replaced Saudi Arabia as the top supplier of oil to the United States. As a consequence, the Reagan administration believed it imperative to save Mexico from its economic disaster. As a result the U.S. implemented a series of agreements that included the immediate rescheduling of 23 billion dollars in loans and other measures. 20

The 1982 crisis, like the boom of 1976-1981, was linked to international events. From 1970 to 1980, Mexico benefited by the rise in petroleum prices, the excess liquidity of international capital markets, and the intense competition between international banks for the placement of funds with lower interest rates. Between 1980 and 1982, not only did crude prices drop but floating interest rates on loans also increased. The industrialized countries, which suffered one of their worst recessionary periods, resorted to protectionism, a practice that hurt the export of manufactured goods coming from countries such

as Mexico. In 1981 the total external debt of the public sector increased by 19 billion dollars, half of which was short-term debt. The proportion of the foreign public debt accounted for by short-term debt rose from 4.4 to 20.3 percent from 1980-1981. Economists analyzing the explosion of Mexican foreign debt between 1979 and 1982 agree that external factors interacted with internal ones making the economic crisis of 1982 extremely severe. 21

On August 15, 1982, in the need of financing, Mexico obtained from the United States a loan for 1 billion dollars in exchange for the future sale of an unspecified amount of petroleum for the U.S. Strategic Reserve at a price 10 dollars below the average OPEC price of 34 dollars. This agreement stipulated that Mexico must reach an agreement with the IMF by mid-October. On August 20, a loan of 500 million to 1 billion dollars was agreed to for one year with that institution. Mexico's creditors also agreed to a moratorium on the payments of principal on the debt to give Mexico time to complete an agreement with the IMF. 22

It was within the context of rising social unrest and the inability of the state to manage the economic crisis that López Portillo announced the nationalization of the banks on September 1, 1982. Carlos Tello and José Andrés de Oteyza were the main spokesmen in the decision to nationalize the banks. For those men, heads of the Secretary of Budget and Planning and the Secretary of Natural Resources respectively, the measure constituted the best means to stop the capital outflow and break

the economic crisis. However, political factors were the most important motivation behind the bank nationalization decision. Politically, in the short term, the decision appears to have had the effect intended. Popular support for the president increased. Yet economically the measure did nothing to stop the outflow of capital. Politically, López Portillo gained the support of most of the political parties, but in the economic field he was criticized by powerful economic groups. 23

#### STRATEGY FOR A NEW PEMEX.

Miguel de la Madrid Hurtado took possession of the presidential office on December 1, 1982. De la Madrid set forth a number of points for an economic reorganization program in which he underscored the need for austerity. All Mexicans could contribute to resolving the crisis because there were no foreign aid or magic solution to replace that effort. De la Madrid rejected financial populism, and announced that there would be structural changes to combat failures in the mixed economy such as insufficient domestic savings, low productivity, non competitiveness of Mexican products abroad, and social inequality. De la Madrid also stressed the need to curb the growth of public spending, respect the prerogatives of responsible national business and avoid waste and corruption. 24

De la Madrid's commitment to such structural reforms was established by his support of a November 1982 agreement with the IMF. In making structural reforms, he focused on trimming

subsidies, eliminating inefficient government-owned firms, pursuing realistic prices and decreasing the state's share of the economy. Under the IMF accord, the Fund would provide Mexico 3.84 billion dollars extended fund facility credit, as well as 40 million to 880 million dollars from its compensatory financing facility. As a response to the Fund and the U.S. Secretary of the Treasury's request, 530 private banks supplied Mexico with 5 billion dollars in credit to carry the country through 1983. Additionally, major credit banks provided a bridging loan of 33 million dollars to meet debt obligations falling due at the end of February 1983, until the first payment of 1.7 billion dollars from the larger credit was available. 25

In this adverse context, which De la Madrid had begun to solve because of his strong commitment as shown in this inaugural speech:

"Energy resources are an ineluctable part of our nation's patrimony. We still exploit oil in order to continue along the road of development, taking care to use it for the benefit of present and future generations, without considering petroleum a panacea that diminishes efforts in other aspects of our development. We must pay greater attention to adequate planning and the honest and efficient development of our petroleum industry, the fundamental pillar of our economic nationalism". 26

To accomplish changes in PEMEX, De la Madrid named as Director General Mario Ramón Beteta, a lawyer and economist who had served as head of both the Bank of Mexico and the Finance Ministry. Beteta accepted the challenge to improve PEMEX's

conditions and to implement De la Madrid's policies. In his first annual report to the president issued on March 18, 1983, Beteta underscored the disparity in the growth of PEMEX compared to its ability to manage , plan and process information, a divergence aggravated by economic conditions at home and abroad and by human failures in the institution often involving corrupt practices. Also Beteta in his speech noted that among the tasks facing PEMEX were (1) increasing the motivation to produce, (2) reassigning personnel to assure greater efficiency, (3) decentralizing the firm's activities, (4) avoiding unnecessary hiring, and (5) emphasizing training and development programs. 27

That same year on September 1, 1983, according to De la Madrid's first report to the nation, his administration had encountered an "economy characterized by collapse and a contraction of production, hyperinflation, growing unemployment, explosive growth of the public sector deficit, reduction in savings in the domestic financial system, severe devaluation of the peso and loss of monetary sovereignty, depletion of international reserves, an external debt of unprecedented magnitude and the virtual suspension of payments to international creditors." 28

Mexico's economic and social picture situation looked very dark. Based on the directions issued by the president and the economic situation, Beteta had to delay the expansion of PEMEX. The austerity program strengthened Beteta's support to raise domestic oil prices, to rationalize consumption, promote conservation and generate funds for both the government and the

oil industry. Domestic prices changed each year, but by 1986 the changes were monthly in order to link both the evolution of the economy and the international market. Domestic price increases combined with higher export revenues and reduced operating cost resulted in earnings 48 percent higher in 1984 compared with those in 1983, even though the volume of sales was virtually the same in these two years. PEMEX's real savings was 2.7 trillion pesos or 72 percent of sales, permitting the industry to pay 1.7 trillion pesos in direct taxes and duties or 46 percent of its total sales. Also PEMEX production costs were 30 percent below the standard cost of producing a barrel of oil, using constant prices. 29

Among Beteta's efforts to economize were efforts to inventor the millions of tons of equipment at home and abroad that led to relocation of more than a half-million tons of goods for use at proper work sites. This action rendered savings of some 95 billion pesos. The improvement of Port Pajaritos storage facilities made PEMEX able to economize 200 million pesos yearly. In 1983, Beteta commenced an import substitution program to encourage the domestic production of tank-trucks, tanker cars, ships, and other equipment used by PEMEX. This program had modest success by early 1987. To increase Mexican economy, PEMEX also offered financial inducements to Mexican firms engaged in import substitution. As of November 1984, thirteen firms had borrowed a total of 3,850 million pesos. That program allegedly saved 550 million pesos from 1983-1985, and Beteta noted that imports, which represented two-thirds of PEMEX's acquisitions in 1981,

constituted only one-fifth of its purchases in 1985. 30

On August 13, 1984, De la Madrid approved a National Energy Program for 1984 to 1988. The eight goals established were related to achieving long-run self-sufficiency, contributing to national development by generating foreign exchange, taxes and economic activity. The program also sought to assist in social development by expanding protection and avoiding regional and environmental disequilibriums, conserving energy and encouraging its efficient use in production, distribution, and final utilization. This would help attain a more rational energy balance in a country 92 percent dependent on hydrocarbons by developing other sources of energy, improving Mexico's scientific and technological capability to enhance national independence. The program also hoped to achieve a more efficient and better integrated energy sector one that would help to strengthen the world oil market in accordance with national interests. 31

Reference Mexican oil reserves, figures published by PEMEX revealed that on December 31, 1984, proven reserves totaled 71.75 billion barrels of liquid hydrocarbons compared to 72.5 billion barrels the previous year. On December 31, 1985, oil reserves fell to 70.9 billion barrels and the next year reserves declined to 70 billion barrels. However, PEMEX had as a goal to add 5.2 billion barrels to reserves between 1986 to 1990. However that volume represents only 73 % extraction, and consequently reserves will decline at least 4 percent during the period. 32

The picture darkened in 1986 when export revenue amounted to 6.7 billion, just 42 percent of the previous three-year annual

average, but PEMEX was able to pay almost 5 billion dollars between 1983 and 1987, having lowered its external debt from almost 20 billion to 15.35 billion dollars. Fixed assets grew to 8.5 trillion pesos in 1985. By decreasing foreign currency liabilities while augmenting its net worth, the ratio of PEMEX 's own resources to those borrowed rose from 43 to 57 percent. Between 1983 and 1986, PEMEX was able to finance internally 70 percent of its own operations and investments; a figure that was 20 percent during the previous administration. As a comparison, during López Portillo's administration, PEMEX drilled an average of 78.3 exploratory wells and 180 developmental wells annually. The first 3 years of De la Madrid's administration the figures were 65.3 and 218.5 respectively. 33

PEMEX continued to adhere to its policy of limiting sales to any one country to no more than 50 percent of total exports. This policy was directed at the United States, the largest oil customer of Mexico, which surpassed Saudi Arabia between 1983 and 1985 as the number one external supplier of the U.S. market. This was done because an excessive reliance on a single market could increase Mexico's vulnerability to the imposition of special taxes or import restrictions which might be imposed during periods of surplus. The policy was based on the continued insistence that no country should depend on Mexico for more than one-fifth of its crude imports. 34

The government, pursuant to past conventions, continued to set export prices instead of adopting market charges for the 1.5 to 1.7 million bpd shipped abroad under the five-year plan. The

policy of selling only to final consumers to prevent retrading of Mexican oil also continued. Also, to prevent U.S. purchases from soaring above the 50 percent mark, PEMEX offered lower prices to its European and Far East customers. Thus, the sheer size of the new PEMEX meant that its internal and external policies would radiate throughout the economy. In the words of Beteta: "Perhaps no institution has as great an importance and capacity to pull the country out of its economic problems as Petróleos Mexicanos". 35

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CHAPTER VI  
MEXICAN OIL IN THE FUTURE.

De la Madrid's administration was a transition government which inherited the critical problems from the last two administrations. Both De la Madrid and Beteta did the best they could to save the country from the deep recession it was suffering, and at least they were able to maintain the nation on a course which if not increasing greatly its economy at least put on a path toward a more healthy economy.

FOREIGN POLICY AND ECONOMIC POLICY: SOME FACTS.

There are a large number of issues confronting by the United States and Mexico. This is the result of a long border between the two countries and some history which occurred in the political, social, economic and military realms since the nineteenth century. Mexico is profoundly dependent on the United States in economic matters. The nature of this relationship is totally unequal. While Mexico gets 63 percent of its imports from the U.S., the United States gets only about 3 percent of its imports from Mexico. Trade relations between the two countries have given substantial benefits to the United States and have

represented an outflow of Mexican reserves because of the pro-U.S. trade balance; thus, in 1981 the Mexico trade deficit with U.S. was -4,768 million dollars. 1

The central issue in the relationship between Mexico and the United States centers on U.S. strategic security. In this context the United States must have sources of raw materials on which it can depend for its industrial and agricultural production. Development and protection for those inputs may lead to intervention or penetration of other countries. In this manner, the U.S. on the oil issue constantly applies pressure for higher oil production and more exports. The United States attempts to influence those groups in Mexico to support that policy. On the issue of immigration, it has been pointed that by the year 2000 the United States will have to import around 20 million migrants in order to provide the labor force required to maintain a 3.5 percent annual growth rate. From Mexico's point of view, it must realistically appraise its existence within the sphere of influence of the United States. Mexico's economic interests lie in fair access to U.S. markets, in encouragement of tourism, and in promotion of border-area economic activities that would provide jobs for Mexican workers and capital for industrial development. Mexico also needs to resist certain pressures: the outflow of Mexican capital to the United States must be constrained; inflationary pressures must be resisted; and unfavorable attachments to the U.S. economy need to be reduced. 2

López Portillo's foreign policy with the Sandinistas in the 1970's was seen as Mexico trying to pursue regional leadership.

On the contrary, De la Madrid's policy toward Nicaragua in the mid-1980s denoted Mexico's transition to a country with less foreign policy latitude if it wanted to be seen as a responsible debtor. De la Madrid's policy was concerned with economic considerations at home and the imperative to obtain support from Washington and international financial sources. Those in the López Portillo administration who believed that generous infusions of oil, cash, and technical assistance would promote pluralism, civil liberties and tolerance within Nicaragua were only idealists. De la Madrid's pragmatism was referred in reduced shipments of oil to the Managua regime because oil selling is a business, and the Nicaraguans were not able to pay. However, later in 1987 Mexico's resumed modest exports of crude oil to Sandinistas upon appropriate compensation. 3

During the last eighteen months of De la Madrid's sexennium, he established the basis for an increase in the Mexican economy. Essential to Mexico's economy opening to the world was the Japan's decision to invest over 1 billion dollars in the Pacific Petroleum Project to facilitate the transport of crude oil from southeastern production areas to Pacific coast ports where it could be shipped to Japan, which was importing 180,000 bpd. Other investments include 250 million dollars to improve Mexico's oil infrastructure, and 500 million dollars to support both Mexico's export promotion program and the development of the Sicartsa II steel complex on the Pacific coast. Diversification in nonpetroleum exports shot up 28 percent in 1987 and Mexico registered a 4.8 billion trade surplus, which combined with

capital inflows boosted international reserves to a record 15 billion dollars. 4 Structural reforms and investments will show results probably by the 1990s, in terms of reducing unemployment, curbing inflation, and promoting development. 5

#### THE PROSPECTS FOR MEXICAN OIL.

Mexico's economy has become more involved with the world economy. Involvements with Japan, Western Europe and Canada have contributed to this integration. Geography and mutual interests enhance the symbiotic relationship between the United States and Mexico, whose frontier is crossed more than 300 million times a year by residents of the two countries. In this manner the economic relationship is paramount. One example of this is the assembly industry concentrated in the vicinity of the border where 10 million people live. This industry generated almost 300,000 jobs in Mexico and added 1.5 billion dollars to the value of manufactured goods destined for the United States. Another example is related to private U.S. companies and the Department of Energy who purchased 50 percent of the 1.34 million bpd of oil that PEMEX shipped abroad in 1987. Additionally, U.S. banks were the principal sources of commercial credit. They hold one-third of Mexico's external debt. Another important economic situation because of the common border between the two countries is that Mexican-Americans and Mexicans living in the United States returned in the same year some 2 to 3 billion dollars in remittances to their families south the Río Grande. Also

increasing the relationship between the two neighbors were U.S. investments in Mexico which were 63 percent of the 19.5 billion dollars invested by foreign entrepreneurs. Also, American tourists represented 85 percent of the tourists visiting Mexico, of the total of 5 million foreign tourists who visited the country in 1987. On the other hand, sales to Mexico generated 500,000 jobs for North American workers. Also Mexican workers are considered very important to the success of agriculture in California's Imperial Valley, as well as to assembly, textile and construction industries throughout the Southwest. PEMEX is the largest single contributor to the U.S. Strategic Petroleum Reserve. 6

As has been noted, Mexico's economy is very much tied to the United States. According to that imperative, President Carlos Salinas de Gortari noted in his First State of the Nation Report, on November 1, 1989 the following:

"Relations with the United States of America are of special significance to Mexico. We reject confrontation as being senseless, and submission as being offensive to our firmest convictions. We view the future with assurance, without ignoring a difficult past." 7

"Relations with such a powerful neighbor, with the most complex common border in the world and a history burdened by acts of extreme aggression, will never be easy. Nevertheless, there is no reason for our relations always to be bad or tense". 8

"The cordiality that exists today is understandable because matters of common interest require concerted actions. Our market

is now more open than that of the United States: this allows us to engage in a positive offensive in trade relations."

Reference the future of Mexican oil and the policies he intended to pursue:

"In the field of energy sources, we are maintaining intensive activity. The investment program for PEMEX is directed toward achieving a balance among the stages of exploration, exploitation, processing and distribution. We propose to maintain the levels of reserves to prevent a deterioration of production levels and adjust exports to the needs of the nation. The reclassification of various petrochemical products from basic to secondary, in keeping with technological changes that have occurred, will free public resources and help to achieve this aim, while at the same time stimulating domestic production of these products. Intensive efforts are being made to increase the productivity of this strategic activity, now that new labor relations have been established that protect the rights of the workers and also the rights of the Mexican people, the true owners of this enterprise." 10

ENDNOTES.

1. Jesús-Agustín Velasco-S, Impacts of Mexican Oil Policy on Economic and Political Development. D.C. Heath and Company, 1983, pp. 166-171.

2. Ibid, pp. 171-172.

3. George W. Grayson, Oil and Mexican Foreign Policy, University of Pittsburg Press, 1988, p. 154.

4. Ibid, pp. 156-157.

5. Ibid, p. 157.

6. Ibid, pp. 158-160.

7. Carlos Salinas de Gortari, First State of the Nation Report, Embassy of Mexico, Washington, D.D., 1989, p. 30.

8. Ibid.

9. Ibid.

10. Ibid, pp. 36-37.

## CHAPTER VII

### CONCLUSIONS

Mexico obtained its independence in 1821 from Spain and as a result for the first time the Law of Mines established that the products of the subsoil pertained to the Mexican nation. It was in 1857 when the Constitution established within Mexican law that oil and minerals are owned by Mexico and set the basis for subsequent laws related to the possession of those strategic raw materials.

During the long dictatorship of General Porfirio Díaz, those laws were put aside and most of the initial investments in the Mexican oil business were made by foreigners as a consequence of Díaz's policies. The largest investors were the Americans and British who obtained vast concessions in lands and rights to exploit oil.

The political and social movement named the Revolution of 1910 crystallized Mexican oil policy in the Constitution of 1917, whose Article 27, establishes that crude oil, gas and other minerals lying in the subsoil are owned by the nation for development and achieving of revolutionary goals.

Based on the Constitution of 1917, President Lázaro Cárdenas established the principles and objectives of oil nationalization

as a means to return oil to the nation-its legitimate owner-and consolidate Mexico's political, social and economic development. With very few resources and the debt resulting from nationalization, restructuring of the oil industry was very difficult considering the pressures of the foreign oil companies and their national governments.

Having solved the initial problems between 1946 and 1958, the national oil industry, PEMEX, had the opportunity to begin a real development of the oil fields, but because of a number of problems among which were scarce economic resources, equipment, technicians, and labor problems. Through the following administrations, PEMEX was able to develop the petroleum industry, having had more achievements than failures. This could be observed in the late 1970s and early 1980s, when Mexico was one of the principal producers and exporters of crude oil.

In 1982, Mexico suffered its worst economic crisis because of the government's goal of improving greatly the political, social and economic situation of the Mexican people. External factors were combined with internal ones to put Mexico in this crisis situation. Examples of this are the decline in international oil prices and worldwide recession.

The road to save Mexico from this severe crisis was very arduous. Consequently, the government had to resort to loans in the international market. By holding to realistic policies, internally and externally, the government and PEMEX were able to solve the crisis and establish the bases to forge a reorganized oil industry and also to set the basis for the establishment of

new policies related to exploration and maintaining of oil reserves. Thus, they could facilitate exploitation and exportation.

Mexican nationalism has allowed Mexican governments and people to surpass these difficult situations and reach a more stable position in the international environment. The struggle has not been easy for Mexico. Its economy, mostly based on oil, is changing. The diversification of national production and exportation aided by agreements with foreign investors would permit Mexico to expand its economy and solve many social problems. Relations not only with neighbors, but also with European and Asiatic countries in political and economic areas can help to develop Mexican society. Mexico will continue depending on oil to support its economic goals. This must be done, however, by the setting of realistic policies in order to prevent the exhausting of oil reserves. In this way they may be used not only for present generations but also for future Mexican generations.

Petróleos Mexicanos, despite the many different administrations and policies pursued throughout its history, has been able to grow and also to develop Mexico's economy. Mexico will continue to pursue its own goals. It will not join OPEC whose objectives are different from those maintained by Mexican government. Mexico believes that not only will oil serve to continue developing the country, but that it will also help export diversification. Thus, Mexico's crude oil export policy differs from that of most other oil exporting countries. Mexico

keeps its oil for future generations and now is decentralizing secondary petrochemical products to facilitate and have more efficient administration.

Corruption has been a cancer throughout PEMEX's existence; its strong workers union has been riddled with corruption. President Salinas in this respect has made many efforts to limit and clean up this illness by pursuing a restructuring and modernization policy.

For the future, Mexican oil will be related to Mexico's growth and development. Oil policy will ensure that the Mexican people enjoy a better life, with less frustrations and more social and economic goals achieved.

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